

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re Application of:

KOEK, et al.

Serial No.: 10/538,933

Art Unit: 1625

Filed: June 13, 2005

Examiner: DESAI, R.

For: **SILYL ETHERS**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

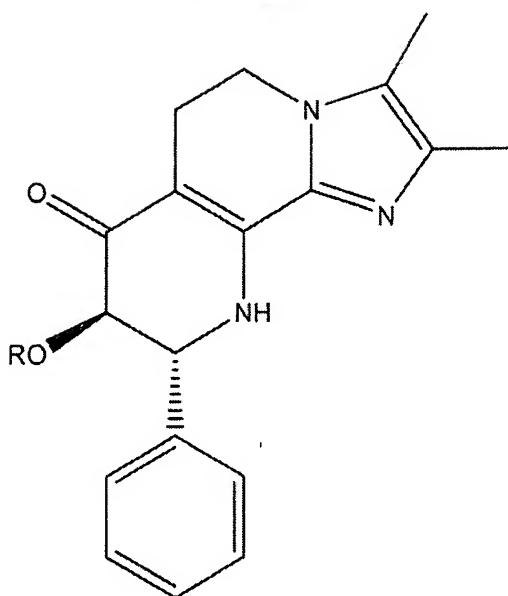
Sir:

Declaration Under 37 CFR 1.132

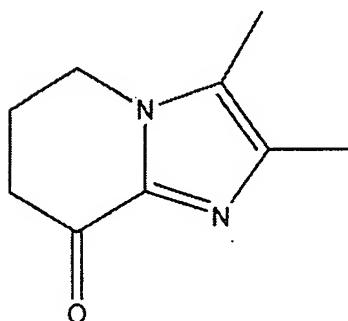
1. I, Mr. Jan Koek, declare and say:

- 1.1. That I am a citizen of the Netherlands, residing at Schoolstraat 16 in 9771BK Sauwerd/Groningen/ The Netherlands.
- 1.2. That I am an inventor of the captioned application for U.S. Letters Patent.
- 1.3. That, I have received my Bachelors Degree in Chemistry at the HNWO Technical School (1979-1983) and completed courses in Organic Chemistry (equivalent to a Masters Degree) at the University of Groningen during 1983-1988.
- 1.4. That, I worked at the University of Groningen, 1983-1988, in the group of Prof. Dr. Hans Wynberg.
That, I worked at Syncrom since 1988, initially as a Research Chemist, then as a Research Chemist / Group Leader from 1999 until 2004, and since 2004 as a Research Chemist/ Project Manager.

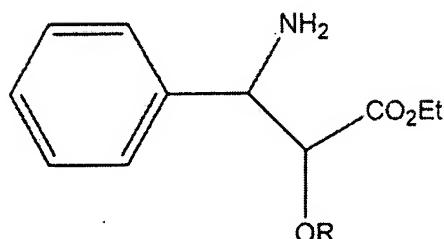
2. Traversing the rejections under 35 USC §103(a)
- 2.1 I have studied the Office Action dated May 29, 2007 as well as the cited references WO 01/72756, WO 01/072754, and WO 98/42707. I am aware that the examiner has rejected claims 1-6 under 35 U.S.C. 102(b) as being anticipated by WO 01/72756 and WO 01/72754. I am also aware that the examiner has rejected claims 1-8 under 35 U.S.C. 102(b) as being anticipated by WO98/42707. However, the claims rejected under 35 U.S.C. 102(b) have been adequately addressed in the written Response to the Official Action. Further, I am aware that claims 1-8 have been rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/72756, WO 01/72754 and WO 98/42707. The presently pending claims are patentable over the cited references because 1) None of the cited references teach or suggest using the presently claimed protecting group, tert-butyl-dimethyl silyl (TBDMS); 2) The cited references teach away from using the protecting group TBDMS because a person of ordinary skill in the art would be motivated to use the protecting group trimethylsilyl (TMS) based on the teachings of the cited references; and 3) None of the cited references teach or suggest the unexpectedly superior properties of using the presently claimed protecting group (TBDMS).
- 2.2 The WO 01/72756 and WO 01/72754 references disclose at pages 20 and 24, respectively, the silyl protecting group TMS and also discuss that TMS is a preferred protecting group. The WO 98/042707 reference teaches reactions of compounds using protecting groups generally but does not disclose any specific protecting groups. None of the cited references teach or suggest using the presently claimed protecting group tert-butyl-dimethyl silyl (TBDMS).
- 2.3 Under my supervision, three separate reactions were conducted to prepare a compound of the following formula:



by reacting a compound of the formula



with a compound of the formula



wherein the substituent R was either

- 1) H;
- 2) trimethylsilyl (TMS); or
- 3) tert-butyl-dimethyl silyl (TBDMS).

The imine formation was performed under acidic conditions using a Dean-Stark apparatus.

- 2.4 After performing each reaction, it was surprisingly discovered that the protecting group TMS was unstable under the reaction conditions necessary to obtain the desired com-

pound. Accordingly, using TMS as a protecting group did not yield any of the desired product due to its instability under reaction conditions.

2.5 However, using the presently claimed protecting group TBDMS, the desired compound was obtained upon completion of the reaction.

2.6 Accordingly, the cited references neither disclose the presently claimed protecting group TBDMS, nor suggest in any way modifying the disclosed protecting groups to obtain the presently claimed protecting group TBDMS. Further, the cited references teach TMS as a preferred protecting group, and do not contain any hint that the TMS protecting group would be insufficient to yield any of the presently claimed product. As such, the cited references would teach the skilled artisan away from using any protecting group other than the TMS protecting group which has been shown to not work under actual reaction conditions to obtain the presently claimed product. Yet further, the presently claimed protecting group TBDMS has been shown to be unexpectedly superior to the protecting group of the prior art, TMS, since it proved to be successful in yielding the desired compound.

2.7 The rejection of claims 1-8 under 35 U.S.C. 103(a) using the cited references is therefore unjustified.

3. The undersigned Declarant declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statement may jeopardize the validity of the application or any patent issuing thereon.

Signed at Groningen

November 27, 2007.

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Mr. Jan Koek